

**REMARKS**

Applicants respectfully request reconsideration and allowance of the pending claims.

**I. Status of the Claims**

With this Amendment A, claims 1, 4, 16, 21, 31 and 40 have been amended, while claims 3, 9, 11, 12, 15, 24, 27, 30 and 37-39 have been canceled and claims 78-85 have been added. Claims 42-77 have been withdrawn from consideration, because they are directed to a non-elected invention. Accordingly, upon entry of this Amendment A, claims 1, 2, 4-8, 10, 13, 14, 16-23, 25, 26, 28, 29, 31-36, 40, 41, 78-85 are pending in this application.

Claim 1 has been amended to require that the band referenced therein have a resistance between 1 and 250 k $\Omega$ . Support for this amendment may be found in canceled claim 11, which depended from claim 1.

Claims 4, 16, 21, 31 and 40 have been amended to correct the claim dependencies therein, and/or for purposes of clarification only.

New claims 78-85 are supported by original claims 2, 3, 11, 4, 7, 8, 10 and 13, respectively.

**II. 35 U.S.C. §112, Second Paragraph Rejection**

It is to be noted that claims 9, 11, 12, 15, 24, 27, 30 and 37-39 have been canceled. Applicants therefore respectfully submit that the rejections under 35 U.S.C. §112, second paragraph are moot, and thus require no further comment at this time.

III. 35 U.S.C. §102(b) Rejections

A. The Claimed Subject Matter

Claim 1, from which now pending claims 2, 6, 7, 16 and 17 depend, is directed, in relevant part, to a **secondary** electrochemical cell that comprises, among other things, a cell can having a label surrounding it that has a first resistance, and a band made from an ink that is printed onto the label at a predetermined location, **the band having a resistance between 1 and 250 kΩ**.

As stated in M.P.E.P. §2131, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. In the present case, for the reasons set forth in detail below, Applicants respectfully submit that **none** of cited U.S. Patents (Nos. 5,747,192; 5,725,966; 6,127,024; and, 5,543,246) disclose each and every element of claim 1. Specifically, Applicants respectfully submit that **none** of the cited U.S. Patents disclose a **secondary** electrochemical cell that comprises a can and a label surrounding it that has a band printed thereon, wherein **the band has a resistance between 1 and 250 kΩ**.

Notably, the Office must give meaning to all of the claim limitations set forth in claim 1, including the limitation contained in the preamble of the claim ("A secondary electrochemical cell capable of receiving a predetermined charge rate, comprising..."). The preamble of claim 1 is necessary to give life, meaning and vitality to the claim as a whole, as it defines a structural limitation and, as such, should be construed as if in the balance of the claim.<sup>1</sup> Any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation.<sup>2</sup>

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<sup>1</sup> It is noted that in situations where the claim preamble "recites limitations of the claim, or, if the claim preamble is 'necessary to give life, meaning, and vitality' to the claim, then the claim preamble should be construed as if in the balance of the claim." See MPEP §2111.02 (quoting *Pitney Bowes, Inc. v. Hewlett-Packard, Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999)).

<sup>2</sup> MPEP §2111.02.I. (citing *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251 (Fed. Cir. 1989)).

Clearly, Applicants contemplated inventing a label having a band printed thereon with a resistivity in the noted range, for use with a rechargeable, or secondary, electrochemical cell. For example, the specification states:

Band **53** has a resistance within a predetermined range, and is positioned at a predetermined location relative to the negative cell terminal **39** to enable charger **100** to detect the presence of band **53** and measure the resistance of the band identifying the cell **10** as suitable to accept a particular charging current. The resistance of ink **28** may furthermore identify the cell size, chemistry, type and/or capacity.<sup>3</sup>

The requirement in the preamble of the claim of "A **secondary** electrochemical cell capable of receiving a predetermined charge rate, comprising" (emphasis added) therefore limits the structure of the claimed invention, as it limits the type of cell upon which the label and band are used, and, implicitly, how the label and band are to be utilized. As such, this preamble limitation must be treated as a claim limitation.

#### **B. Rejection of Claims 1, 6, 16 and 17 over Hughen et al.**

Reconsideration is requested of the rejection of claims 1, 6, 16 and 17 as being anticipated by Hughen et al. (U.S. 5,747,192).

As previously noted, claim 1 has been amended to include the limitations of dependent claim 11, which does not stand rejected here. More specifically, claim 1 requires that the secondary cell label include a band have a resistance between 1 and 250 kΩ.

In contrast to the subject matter to which claim 1 is directed, Hughen et al. is directed to a single ply label for a dry cell, which consists of three layers: a self-supporting, heat shrinkable layer; a supported, pigmented layer; and a supported, pressure-sensitive adhesive layer. (See column 4, lines 20-27.) The pigmented layer is

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<sup>3</sup> See Specification, pp. 3-4, paragraph [0046].

said to have a resistance of greater than about 560 megohms (MΩ). (See column 3, lines 16-20.) Notably, Hughen et al. make **no reference** to **secondary** cell comprising a band **having a resistance between 1 and 250 kΩ**. In fact, they make **no reference** to a secondary cell at all.

Accordingly, claim 1 is respectfully submitted as novel over the cited reference. Inasmuch as claims 6, 16 and 17 depend from claim 1, these claims are submitted as patentable over the cited reference for the same reasons as those set forth with respect to claim 1. Reconsideration of this rejection is therefore respectfully requested.

### **C. Rejection of Claims 1, 6 and 17 over Abe et al. or Weiss et al.**

Reconsideration is requested of the rejection of claims 1, 6 and 17 as being anticipated by Abe et al. (U.S. 5,747,192) or Weiss et al. (U.S. 6,127,024).

As previously noted, claim 1 has been amended to include the limitations of dependent claim 11, which does not stand rejected here. More specifically, claim 1 requires that the secondary cell label include a band have a resistance between 1 and 250 kΩ.

In contrast to the subject matter to which claim 1 is directed, Abe et al. is directed to heat sensitive jacket label for a either a primary or secondary battery. (See column 3, lines 33-37.) The label is said to be composed of a base layer, a metal layer, a heat sensitive adhesive layer, a print layer, and a varnish layer. (See column 3, lines 42-45.) The print layer is made using a print ink of some kind. (See column 4, lines 19-20.)

Weiss et al. is directed to a dry cell battery which has a label thereon. The label is said to include a single heat-shrinkable polymeric layer, a graphic layer, and a varnish layer. (Column 3, lines 33-36.) The graphic layer may include a metallized layer combined with a print layer, or it may be just an ink layer. (Column 3, lines 50-53.)

Notably, neither Abe et al. nor Weiss et al. make **any reference** to a secondary cell comprising a label that includes a band having a resistance as required by claim 1. Specifically, Abe et al. and Weiss et al. make **no reference** to the resistivity of, for example, the print or graphic layer. Furthermore, Weiss et al. make **no reference** to a secondary cell.

Accordingly, claim 1 is respectfully submitted as novel over the cited references. Inasmuch as claims 6 and 17 depend from claim 1, these claims are submitted as patentable over the cited references for the same reasons as those set forth with respect to claim 1. Reconsideration of this rejection is therefore respectfully requested.

#### **D. Rejection of Claims 1, 2, 6, 7, 16 and 17 over Treger**

Reconsideration is requested of the rejection of claims 1, 2, 6, 7, 16 and 17 as being anticipated by Treger (U.S. 5,543,246).

As previously noted, claim 1 has been amended to include the limitations of dependent claim 11, which does not stand rejected here. More specifically, claim 1 requires that the secondary cell label include a band have a resistance between 1 and 250 kΩ.

In contrast to the subject matter to which claim 1 is directed, Treger is directed to a **primary** alkaline cell that includes a condition indicator secured to a terminal end thereof. (See column 1, lines 5-8 and column 2, lines 1-13.) The condition indicator is said to be a film-laminate that has a resistive layer, which may be an ink that preferably contains a silver or a silver-plated nickel, on its inside surface. (See column 3, lines 1-9.) Notably, Treger makes **no reference** to secondary cell comprising a band having such a resistance. Furthermore, Treger makes **no reference** to a secondary cell at all. Finally, Treger makes **no reference** to the resistivity of the ink layer noted therein.

Accordingly, claim 1 is respectfully submitted as novel over the cited reference. Inasmuch as claims 2, 6, 7, 16 and 17 depend from claim 1, these claims are submitted as patentable over the cited reference for the same reasons as those set forth with respect to claim 1. Reconsideration of this rejection is therefore respectfully requested.

IV. 35 U.S.C. §103(a) Rejections

A. The Claimed Subject Matter

As previously noted above, claim 1, from which now pending claims 4, 5, 8-10, 12 and 16 depend, is directed, in relevant part, to a **secondary** electrochemical cell that comprises, among other things, a cell can having a label surrounding it that has a first resistance, and a band made from an ink that is printed onto the label at a predetermined location, **the band having a resistance between 1 and 250 kΩ.**

Similarly, claim 18, from which now pending claims 19-23, 25, 26 and 31-33 depend, is directed, in relevant part, to a **secondary** electrochemical cell that comprises, among other things, a cell can having a label surrounding it that has a first resistance and that includes a band disposed at a predetermined location thereon, wherein **the band has a second resistance between 1 and 100 kΩ.**

As stated in M.P.E.P. §2143, in order for the Office to show a *prima facie* case of obviousness, the Office must meet three criteria: (1) the prior art reference(s) must teach or suggest all of the claim limitations; (2) there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings; and (3) there must be some reasonable expectation of success. Furthermore, as previously noted, the preamble of these claims limit the structure of the claimed invention, as it limits the type of cell upon which the label and band are used, and, implicitly, how the label and band are to be utilized. As such, this preamble limitation must be treated as a claim limitation.

In the instant case, for the reasons set forth in detail below, Applicants respectfully submit the Office has failed to meet its burden under the first criteria, inasmuch as the cited references have not disclosed or suggested all of the limitations of either claim 1 or claim 18, and/or the second criteria, inasmuch as there is simply no suggestion or motivation to modify or combine the cited references to arrive at either claim 1 or claim 18. Accordingly, reconsideration of these rejections is respectfully requested.

**B. Rejection of Claims 4, 18, 19, 21, 22 and 31-33 in view of Treger**

Reconsideration is requested of the rejection of claims 4, 18, 19, 21, 22 and 31-33 as being obvious in view of Treger.

The relevant limitations of claim 1, from which claim 4 depends, and claim 18, from which claims 19, 21, 22 and 31-33 depend, have been set out in detail in Parts II.A. and III.B., above. Additionally, the relevant disclosure of Treger has been set out in detail in Part II.D., above. In the interests of brevity, these will not be fully repeated here.

Applicants respectfully submit the Office has failed to establish a *prima facie* case of obviousness in the rejection of the present claims, inasmuch as Treger fails to disclose or suggest a **secondary** electrochemical cell that comprises, among other things, a cell can having a label surrounding it that has a first resistance, and a band having a **resistance between 1 and 250 k $\Omega$** , or a **resistance between 1 and 100 k $\Omega$** . In fact, Treger makes **no reference** to a secondary cell at all, and also makes **no reference** to the resistivity of the ink layer, which is part of the condition indicator disclosed therein.

In view of the foregoing, Applicants respectfully submit claims 1 and 18 are patentable over the cited reference. Inasmuch as claim 4 depends from claim 1, and claims 19, 21, 22 and 31-33 depend from claim 18, these claims are submitted as patentable over the cited reference for the same reasons as those set forth with respect to claim 1 or claim 18. Reconsideration of this rejection is therefore respectfully requested.

**C. Rejection of Claims 5 and 20 in view of Treger and Iwaizono et al.**

Reconsideration is requested of the rejection of claims 5 and 20 as being obvious in view of the combination of Treger (U.S. 5,543,246) and Iwaizono et al. (U.S. 6,322,921).

The relevant limitations of claim 1, from which claim 5 depends, and claim 18, from which claim 20 depends, have been set out in detail in Parts II.A. and III.B., above.

Additionally, the relevant disclosure of Treger has been set out in detail in Part II.D., above. Finally, Applicants positions with respect to the nonobviousness of claims 1 and 18 in view of Treger alone are set forth in Part IV.B., above. In the interests of brevity, these will not be fully repeated here.

Iwaizono et al. is directed to a secondary cell that includes a safety device for venting internal gas pressure therein if it becomes unusually high, in order to prevent bursting of the battery. (See, e.g., the Abstract.) Notably, however, **no reference** is made to such a cell which has a label that includes a band having a particular resistance, and thus no reference is made to a label that includes a band having a **resistance between 1 and 250 k $\Omega$** , or a **resistance between 1 and 100 k $\Omega$** . In fact, **no reference** is even made to a cell label therein.

Applicants therefore respectfully submit the Office has failed to establish a *prima facie* case of obviousness in the rejection of the present claims. First, Applicants respectfully submit one of ordinary skill in the art would not be motivated to combined these two references, inasmuch as Treger is directed to a primary cell, and the means by which to monitor the current state of charge therein, while Iwaizono et al. is directed to a secondary cell and the means for controlling the buildup of internal pressure therein during the recharging of the cell. However, even assuming *arguendo* that such motivation exists, the combination of Treger and Iwaizono et al. fail to disclose or suggest each and every limitation of the claimed subject matter. Specifically, the combination fails to disclose or suggest a **secondary** electrochemical cell that comprises a label that has a first resistance, and a band having a **resistance between 1 and 250 k $\Omega$** , or a **resistance between 1 and 100 k $\Omega$** .

In view of the foregoing, Applicants respectfully submit claims 1 and 18 are patentable over the cited reference. Inasmuch as claim 5 depends from claim 1, and claim 20 depends from claim 18, these claims are submitted as patentable over the cited reference for the same reasons as those set forth with respect to claim 1 or claim 18. Reconsideration of this rejection is therefore respectfully requested.



**D. Rejection of Claims 8, 10, 23, 25 and 26 in view of Treger and Kiernan et al.**

Reconsideration is requested of the rejection of claims 8, 10, 23, 25 and 26 as being obvious in view of the combination of Treger (U.S. 5,543,246) and Kernan et al. (U.S. 4,723,656).

The relevant limitations of claim 1, from which claims 8 and 10 depend, and claim 18, from which claims 23, 25 and 26 depend, have been set out in detail in Parts II.A. and III.B., above. Additionally, the relevant disclosure of Treger has been set out in detail in Part II.D., above. Finally, Applicants positions with respect to the nonobviousness of claims 1 and 18 in view of Treger alone are set forth in Part IV.B., above. In the interests of brevity, these will not be fully repeated here.

Kiernan et al. is directed to a package for a primary cell that includes a voltage indicator that is integrally associated with the **package**. (See, e.g., the Abstract.) The indicator includes an electrically resistive element comprised of a material that may be an epoxy or urethane based silver, nickel or carbon, and that may be in the form of a conductive ink. (See column 3, lines 58-60, and column 5, lines 2-8.) The resistive material is designed to have a resistance comparable to the actual device that would use the battery size being tested. For example, a device using a D size cell would have a resistance between 2-4 **ohms**, while a device using a C size or AA size would have a resistance between 3-6 **ohms**. (See column 5, lines 15-22.) Notably, **no reference** is made to **secondary** cell which has a **label**, surrounding the secondary cell can thereof, that includes a band having a particular resistance, and thus no reference is made to a label that includes a band having a resistance between 1 and 250 **kΩ**, or a resistance between 1 and 100 **kΩ**. In fact, **no reference** is even made to a cell label therein.

Applicants therefore respectfully submit the Office has failed to establish a *prima facie* case of obviousness in the rejection of the present claims. First, **both** references are directed to a **primary** cell, rather than a secondary cell. As previously noted above, the preamble of claim 1, and claim 18, is necessary to give life, meaning and vitality to the claim as a whole, as it defines a structural limitation and, as such, should be construed as if in the balance of the claim. Furthermore, any terminology in the

preamble that limits the structure of the claimed invention must be treated as a claim limitation. **Neither reference** discloses or suggests a **secondary** cell, as claimed herein. Second, **neither reference** discloses or suggests a label that surrounds the secondary cell can that includes a band having a resistance between 1 and 250 **k $\Omega$** , or a resistance between 1 and 100 **k $\Omega$** . In fact, this combination arguably **teaches away** from the subject matter claimed here, given that Kiernan et al. is silent with respect to the cell label, and teaches a cell package having a voltage indicator that includes a resistive material having a resistance that is **nearly 1000 times less** than the that of the band of claim 1 or claim 18.

In view of the foregoing, Applicants respectfully submit claims 1 and 18 are patentable over the cited reference. Inasmuch as claims 8 and 10 depend from claim 1, and claims 23, 25 and 26 depend from claim 18, these claims are submitted as patentable over the cited reference for the same reasons as those set forth with respect to claim 1 or claim 18. Reconsideration of this rejection is therefore respectfully requested.

**V. Allowable and Allowed Subject Matter**

Applicants acknowledge the Office's indication that the subject matter of claims 13, 28 and 29 would be allowable if rewritten in independent form. However, for the reasons set forth above, Applicants respectfully submit these claims, as well as the claims from which they depend, are patentable as presented in this Amendment A.

Applicants also acknowledge the Office's decision to allow claims 34-36, 40 and 41.

**VI. New Claims**

New claims 78-85 depend directly or indirectly from claim 34 and are therefore believed to be allowable, in as much as claim 34 has been allowed (as noted above).

**CONCLUSION**

In view of the foregoing, Applicants respectfully request favorable reconsideration and allowance of the pending claims.

Applicants do not believe that a fee is due in connection with this response. If, however, the Commissioner determines that a fee is due, authorization is hereby given to charge Deposit Account No. 19-1345.

Respectfully submitted,

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